

A NEW SPECIES OF *STEVIA* FROM MEXICO

Tetsukazu Yahara & Akiko Soejima

Department of Biology, Kyushu University, Hakozaki, Fukuoka 812-81, JAPAN
College of Arts and Sciences, University of Osaka Prefecture, Gakuen-machi, Sakai,
Osaka 593, JAPAN

ABSTRACT

A new species of *Stevia*, *S. stolonifera* is described from México.

KEY WORDS: *Stevia*, Asteraceae, México, systematics

The genus *Stevia* consisting of ca. 250 species has two centers of diversification; one in México and another in the Andes Mountains (King & Robinson 1987). Mexican representatives have been comprehensively studied by Grashoff (1972, 1974) who recognized 79 species in his unpublished monograph (dissertation in 1972) and described three additional species in 1974. Since then, five additional species have been described from México (McVaugh 1982; Turner 1992, 1993a, 1993b).

From the view point of reproductive biology, herbaceous species of Mexican *Stevia* are particularly interesting because agamospermy is prevalent among them and specimens with irregular pollen grains (putative apomicts) are known from 32 of the 54 species (Grashoff 1972). To elucidate the evolutionary processes of agamospermy, we are carrying out studies on sexual populations of the herbaceous species. In the course of this study, we have recognized the following novelty.

STEVIA STOLONIFERA Yahara & Soejima, *spec. nov.* TYPE: MEXICO. Jalisco: Sierra del Halo, near a lumber road leaving the Colima highway 7 miles SW of Tecalitlán and extending southeastly toward San Isidro: Steep slopes in mesophytic forests near summits of barrancas in pine zone 13-16 miles from highway; 2000-2200 m; 28-30 Nov. 1959, R. McVaugh & W.N. Koeltz 1169 (HOLOTYPE: TEX).

Steviae origanoideae H.B.K. similis sed rhizomis stoloniferis et foliis crassis subintegris reticulatis differt.

Stoloniferous perennial herbs to 1 m tall. Stems 1-several, simple below, erect, often purplish, puberulous. Internodes as long as leaf blades. Leaves opposite, thick,

semisessile, oblong, 3-5 cm long, 1-2 cm wide, entire or inconspicuously crenate; apex obtuse; base cuneate; upper surface glabrous or sparsely puberulous, glandular-punctate; lower surface paler, reticulate, sparsely puberulous along veins, glandular-punctate. Inflorescence a compound corymb, the total inflorescence up to 4 cm across; branches opposite, puberulous; bracts up to 2.5 cm long, foliaceous, conspicuous. Heads 7-8 mm high, nearly sessile, in small groups ca. 1.0-1.5 cm across. Involucres cylindrical, 4.5-5.5 mm high, sparsely puberulous, sessile-glandular. Phyllaries oblong, acute at apex. Florets white, glabrous, sparsely glandular; lobes ca. 1 mm long, throat plus tube ca. 4 mm long. Achenes heteromorphic, aristate, ca. 2 mm long, dark brown, glabrous except along ribs. Pappus of the 4 adelphocarps of 3 awns, ca. 4 mm long alternating with scales less than 0.2 mm long, fimbriate.

ADDITIONAL SPECIMENS EXAMINED: MEXICO. Michoacán: Volcán Paracutín, Mpio. Uruapan, 16 Nov 1983, *F.R. Barrie 553* (TEX); Coalcomán, 20.9 km al Oeste de Coalcomán hacia Coahuayana, terracería, 550 m, 17 Dec 1984, *C.P. Cowan 4908* (TEX).

This species may be related to *Stevia organoides* H.B.K. but distinctively differs in stoloniferous rhizomes and thick, nearly entire leaves reticulate beneath. The specimens of *S. stolonifera* were collected from western Michoacán and southeastern Jalisco where typical *S. organoides* occurs. Among the three specimens cited above, *Cowan 4908* has normal pollen and is regarded as sexual while pollen is irregular in *McVaugh & W. N. Koelz 1169* (holotype) and *Barrie 553* that are therefore considered to be asexual.

ACKNOWLEDGMENTS

We are grateful to Billie Turner for reviewing the manuscript.

LITERATURE CITED

- Grashoff, J.L. 1972. A systematic study of the North and Central American species of *Stevia*. Doctoral Dissertation. The University of Texas, Austin, Texas.
- Grashoff, J.L. 1974. Novelties in *Stevia*. (Compositae: Eupatorieae). *Brittonia* 26:347-384.
- King, R.M. & H. Robinson. 1987. The genera of the Eupatorieae (Asteraceae). *Monographs of the Missouri Botanical Garden* 22:1-581.
- McVaugh, R. 1982. *Stevia zacatecana* McVaugh, sp. nov. in *Compositarum Mexicanarum pugillo supplementum*. Contributions from the University of Michigan Herbarium 15:196.
- Turner, B.L. 1992. Two new species of *Stevia* (Asteraceae, Eupatorieae) from México. *Phytologia* 72:127-129.

- Turner, B.L. 1993a. A new species of *Stevia* (Asteraceae, Eupatorieae) from Chihuahua, México. *Phytologia* 74:286-288.
- Turner, B.L. 1993b. A new species of *Stevia* (Asteraceae) from the "Antler" region of northern Jalisco. *Phytologia* 74:369-370.